

A NEW SPECIES OF *ROGAS* PARASITIC ON THE GYPSY MOTH,
PORTHETRIA DISPAR

(HYMENOPTERA: BRACONIDAE)

RICHARD C. REARDON,¹ *Plant Protection Division, Agricultural Research Service,
U. S. Department of Agriculture, Otis Air Force Base, Massachusetts*

ABSTRACT—A new species, *Rogas indiscretus*, parasitic on *Porthetria dispar* (L.), is described in comparison with three other species: *R. pallidator* Thunberg, *R. lymantriae* Wantanabe, and *R. quebecensis* Provancher.

This species has been imported from India² to the United States for laboratory rearing and release as part of a biological control program against the gypsy moth, *Porthetria dispar* (L.), by the U. S. Department of Agriculture, Plant Protection Division, Methods Development Branch Laboratory, Otis Air Force Base, Massachusetts. It is an important parasite attacking early instar larvae of *Lymantria obfuscata* Walker, a species very closely allied to the gypsy moth, in the north-eastern part of the Punjab. The new species was first reared in 1967 at the Otis laboratory on gypsy moth larvae, and released in 1968 at Ledyard, Connecticut and Falmouth, Massachusetts. Initial recovery attempts from the release points were unsuccessful during the summer of 1969.

Rogas indiscretus, n. sp.

Female: length 8.0 mm.; anterior wing about 7.0 mm. long; entire body clothed with a short whitish pubescence; malar space approximately equal in length to first segment of flagellum; maxillary palpus 6-segmented with 3rd segment and joint between 2nd and 3rd segments conspicuously thickened; eye distinctly, but not deeply notched opposite antenna insertion; eye 1.5 times as high as narrowest part of face; lateral ocellus 1.5 times as long as ocellular line; antenna 50-segmented; occipital carina complete, joins hypostomal carina above base of mandible by about 1.0 times basal width of mandible; vertex strongly mat with very shallow indistinct punctures; notali distinct, extending about to center of mesoscutum; mesoscutum strongly mat, its punctures dense but so fine and weak as to be almost invisible, medially with some weak rugulosity; stigma emitting the radius slightly before its middle; portion of radial cell distad of stigma at least 2.0 times as long as stigma; 2nd abscissa of radius nearly 2.0 times as long as 1st

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² Specimens obtained from Dr. V. P. Rao, Commonwealth Institute of Biological Control, Bangalore, India.

abscissa; 1st cubital cell and 2nd discoidal cell separated by a clearish vein; 2nd and 3rd cubital cells separated by a clearish vein; 2nd cubital cell 1.5 as wide as high at highest part; 1st abscissa of discoidal vein at least twice as long as nervulus; radiellian cell with slight constriction near middle, and cell slightly widening apically; postnervellus present; mesopleurum strongly mat and with weak, fine, and irregular wrinkling near center with a depressed area that is rather coarsely reticulately wrinkled; sternaulus lacking; propodeum with median delicate longitudinal carina and lateral longitudinal carina complete; propodeum without transverse carina; propodeum rugoso-reticulate; hind coxa mat with very shallow, indistinct punctures; hind femur 5.0 times as long as deep; claws pectinate and not as long as arolium; abdomen length approximately equal to combined length of head and thorax; 1st tergite 1.9 times as wide apically as subbasally; 1st, 2nd, and at least half of the 3rd tergite with a delicate median longitudinal carina; 1st, 2nd, and 3rd tergite mat with moderately strong wrinkling but with a strong longitudinal bias, the wrinkling weaker on basal half of 3rd tergite and fading out near center of the tergite; medial 0.3 of apical margin of 1st tergite raised; ovipositor sheath about as long as 2nd segment of hind tarsus, elongate-elliptical, and 0.4 times as wide as long.

Fulvous: propodeum and 1st tergite tending toward ferruginous; antenna fulvous; tip of mandible, last segment of tarsus, ovipositor sheath, and spot enclosing ocelli black; wing hyaline, and venation brown except where noted; stigma and costa yellowish brown.

Male: similar to female, except that antenna is fuscous.

Specimens were forwarded to Mr. R. D. Eady, Prof. C. Watanabe, and Dr. Roy D. Shenefelt for comparison with previously described specimens of *Rogas* and their replies were as follows:

"Your species resembles *R. pallidator* Thunberg 1822, but differs by having the temples straight and more strongly converging behind the eyes; the sculpture of the mesopleuron, propodeum and first tergite of the gaster very slightly stronger; and the overall color darker and more reddish." (Eady, *in litt.*)

"Your species differs from *R. lymantriae* Watanabe by the following: body red-testaceous and 1st abscissa of radius clearly longer than half the 2nd abscissa." (Watanabe, *in litt.*)

"*Quebecensis* of Provancher is similar in many respects to your species, including pectinate claws, large eyes and ocelli, etc., but differs in the nervellus, in sculpture of propodeum, in the pale band on the antennae in the female and in many other ways. Also your species is quite close to *steinbachi* of Mathur." (Shenefelt, *in litt.*)

Holotype: Female, reared from *Porthetria dispar* (L.) at United States Department of Agriculture, Plant Protection Division, Methods Development Branch Laboratory, Otis Air Force Base, Massachusetts, June 1968. The stock for the colony from which the type and paratypes were reared was received through Dr. V. P. Rao from Kulu, Punjab, India (U. S. National Museum type no. 70842).

Paratypes: Three males and two females, same data as for holotype,

are being deposited in each of the following collections: British Museum Natural History; Entomological Institute, Hokkaido University; H. K. Townes; U. S. National Museum; and Zoological Institute, Academy of Sciences, USSR. Also included in the type series are four females and three males collected in Kulu, Punjab, India on *Porthetria* sp. in 1963, 1964, and 1965 by the Commonwealth Institute of Biological Control. These specimens have been deposited in the U. S. National Museum.

A NEW SUBSPECIES OF *Aedes atropalpus* (COQUILLET) FROM
SOUTHWESTERN UNITED STATES¹

(DIPTERA: CULICIDAE)

GEORGE F. O'MEARA² and GEORGE B. CRAIG, JR., *Department of Biology,
University of Notre Dame, Notre Dame, Indiana 46556*

ABSTRACT—Adults of both sexes and the larva of *Aedes atropalpus nielseni*, n. subsp. from southwestern United States are described. Distinctive behavioral and physiological characteristics of this new subspecies are also listed.

Several authors have recognized morphological differences among populations of *Aedes atropalpus* (Coquillett), especially in the adult mesonotal scaling patterns (Dyar, 1928; Carpenter and LaCasse, 1955; Rozeboom, 1942). Initially such observations led to the description of additional species: *Aedes epactius* by Dyar and Knab (1908) and *Aedes perichares* by Dyar (1921). However, both forms were later synonymized under *Aedes atropalpus*, the former by Aitken (1942) and the latter by Kumm *et al.* (1940). Unfortunately, few specimens were used in either the original descriptions or the later reductions to synonymy. Moreover, in recent years our knowledge of the distribution of *Aedes atropalpus* has significantly increased. Thus the taxonomic status of these morphological variants needs to be re-examined.

The range of *A. atropalpus* extends from Labrador, Canada to Panama and from the Atlantic seaboard to Baja California. Since rockpools are the primary larval habitat, this species tends to be sparsely and irregularly distributed. Such a pattern of infrequent and isolated populations over a large geographical area favors the de-

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²Present address: Entomological Research Center, P.O. Box 308, Vero Beach, Florida 32960.